

BROADBAND INITIATIVES

NM Department of Information Technology

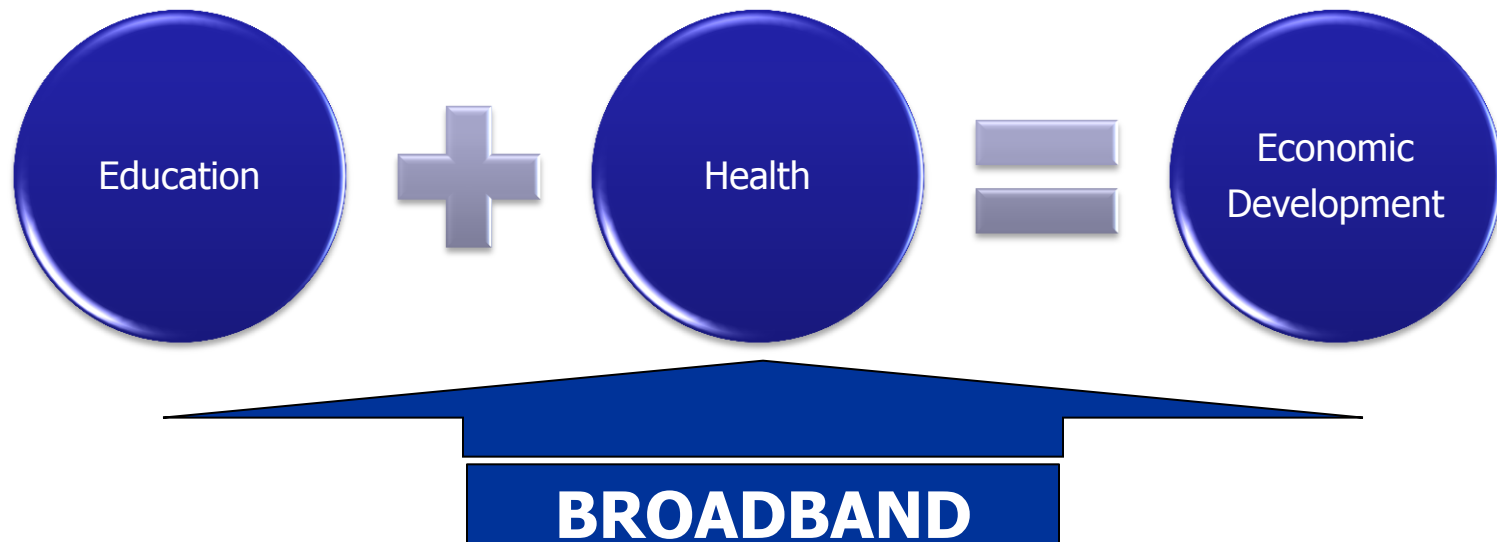
Science Technology and Telecommunications
7 July 2015



The Internet Highway

NMBBP: Essential Utility

- Broadband – Essential Utility
 - Education, Healthcare, Jobs, Social Services, Auto Registration, Purchases, Education, Food Stamps, Healthcare, Scheduling, Motor Vehicle, Medicare, Taxes, Payments, Research, Weather, Investments, Retirement, Financials, Advocacy, Donations, Registration, Marketing, Business, Emergency Services, Family and more.



NMBBP: Broadband Defined

■ Basic

- Size of the pipe (bandwidth) dictates performance (speed)
 - Analogy to transportation: Interstate, Highway, Collector

■ Speed

- Download/Upload speed - megab**its** per second (mbps)
- FCC Broadband defined – 4/1 to 10/1 and now 25/3 mbps

Glossary of Terms

- **Bandwidth**: the rate at which data can be transmitted between your computer and the testing servers.
- **Kbps or KB/sec**: kilobits per second - a measure of Bandwidth. File sizes are normally indicated in terms of "bytes"; one byte is equal to 8 bits. In other words, 1000 kilobits per second is equal to 125 kilobytes per second.
- **Mbps or MB/sec**: Megabits per second - another measure of Bandwidth. One Megabit is equal to 1024 kilobits.
- **Packet**: a unit of data capable of being routed through a computer network.
- **Latency**: the time it takes for a single packet of data to be sent from your computer to the testing server and back (the "round trip" time). This is measured in milliseconds, or thousandths of a second.

Broadband Speed Chart

Download Speed	Activity
768 Kbps - 1.5 Mbps	Basic Email, Voice over Internet (VoIP), Web Browsing, Streaming Music, Video Streaming
1.5 Mbps - 3 Mbps	Telecommuting, Video Conferencing, Standard Definition Video streaming
3 Mbps - 6 Mbps	Enhanced-definition and High-definition Video streaming, File Sharing (medium/large)
6 Mbps - 10 Mbps	Video On-Demand, Gaming
10 Mbps - 25 Mbps	Telemedicine, Remote Education
25 Mbps - 100 Mbps	Educational Services, HD Surveillance
Greater than 100 Mbps	Educational Services, Research Applications, Remote Supercomputing

NMBBP: Technology Types

- Technology Types to Deliver Broadband
 - Digital Subscriber Line (DSL)
 - Copper Wireline (T1)
 - Satellite
 - Mobile Wireless
 - Fixed Wireless
 - Cable
 - Fiber



DoIT INITIATIVES: SIRCITS

- SIRCITS: Statewide Interoperable Radio Communication Transport System

- Issue:

- Provide reliable “middle mile” broadband service
 - Conversion of state telecom sites to digital microwave
 - Support education, health, safety, and state facilities

- Outcome:

- Existing infrastructure fully operational

- Options:

- Complete build out to the eastern and western edges of NM



DoIT INITIATIVES: PSBN

■ PSBN: Public Safety Broadband Network

■ Issue:

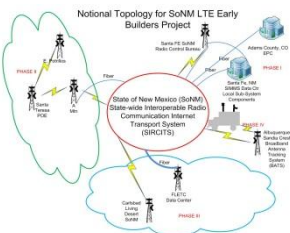
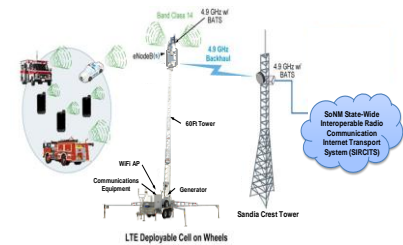
- National public safety communication network
- Requirements to include voice, video, data, and apps
- One device communicates with all levels of responders

■ Outcome:

- Currently in the planning and data collection phase

■ Options:

- Not applicable at this phase of the project



DoIT INITIATIVES: NOC Service

- NOC: Network Operation Services
 - Issue:
 - Centralized network monitoring services save resources
 - Coupled with Help Desk Services can respond quickly
 - Outcome:
 - Currently all DoIT telecom sites are being monitored
 - Discussions with PSFA and PED to pilot schools
 - Options:
 - DoIT provide these services requested by public facilities
 - State contract these services to a provider
 - Individual agencies provide these services
 - Each facility continue as is



DoIT INITIATIVES: E-Rate



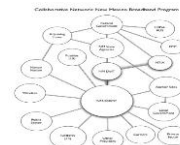
- E-Rate: Federal support for schools, libraries, health
 - Issue:
 - Statewide consortia will provide additional funds to NM
 - Collaboration with education, library, and health
 - Statewide support provides economy of scale
 - Smaller facilities do not have the resources to apply
 - Outcome:
 - DoIT, PED, DCA, DOH, and PSFA initiated a research team
 - Options:
 - DoIT contract with provider to assist state in applications
 - State develop the expertise within governance for services
 - Continue with each facility submitting individual applications



DoIT INITIATIVES: NMBBBP



- NMBBBP: New Mexico Broadband Program
 - Issue: Central broadband planning entity is required
 - Broadband Mapping – Provider data
 - Planning – Regional Broadband Implementation Plans
 - Capacity Building – Broadband Executive and Workgroup
 - Technical Assistance – Business development/engineering
 - Outcome:
 - Hugely successful program with national recognition
 - Collaborative building with public and private interests
 - Large data depository that supports statewide planning
 - Options:
 - Continue the NMBBBP with recurring funding
 - Federal match funds



THANK YOU



Questions